Table 4.1: General Abstract for Road and Drains

Sl. No.	Description	Amount in Rs.
1	Formation of Roads	19,036,804.00 19036837=00/-
2	RCC Drain	10,326,234.00 10010807.00/-
	Total	**29,363,038.00** 29,047,644=00
3	Quality Control	120,000.00
4	Demolition Charges	500,000.00 815000.00
5	Miscellaneous	16,962.00 17356.00
	Total	**30,000,000.00**

ADMINISTRATIVELY SANCTIONED FOR Rs. 300.00 Lakhs
Rupees Three hundred Lakhs only
Under P2019 Major Road
Registered as E E ( ) No. 280/12-13
Subject to conditions contained in enclosed memo EE ( ) No ...../9/
Dt. 23.05.2012 Estimate A/Sanctioned
No.
dated 23.05.2012 Rs. 300.00 Lakhs

Joint Commissioner
(Byatarayanapura)
23/5/12

Technical Sanction for Rs. 300.00 Lakhs
Rupees Three hundred Lakhs only
under P 2019 Major Road / Artificial Sub Artical Road, Major Road Widening
registered as CE No. 4NK/TS/08/12-13 Subject to Conditions contained in enclosed memo
No. ...../..... Dt. 28/05/2012
AE/JE TA 28/5/12 SE (BTP) CE (BTP)

WIDENING OF ROAD FROM FORM BHADRAPPA LAYOUT SIGNAL TO KODIGEHALLI CIRCLE

Abstract for Roads

Sl. No.	Description of Work	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	KSRRB M200-11.1. Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removalof stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness complete as per specifications . II. By Mechanical Means:A. In area of light jungle. MORTH Specification No. 201(PWD SR 2011-12, Pg No 144, Item No. 18.15).	Ha	0.75	21487.68	16116.00
2	KSRRB 200-1. Cutting of trees girth from 600mm to 980mm including cutting of trunks, branches and removal of stumps stacking of serviceable materials within a lead of 100 metres, earth filling in the depressions / pit, labour charges complete as per specifications. MORTH Chapter 2 (PWD SR 2011-12, Pg No 143, Item No. 18.2)	Nos	15.00	290.14	4352.00
4	KSRRB 300-1. Earthwork excavation by manual means in hard soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications. MORTH / Chapter 3(PWD SR 2011-12, Pg No 149, Item No. 19.2)	Cum	6600.16	165.28	1090895.00 1090874.00

Sl. No.	Description of Work	Unit	Quantity	Rate in Rs.	Amount in Rs.
5	KSRRB M300-59.2. Loosening, levelling and compacting origial ground supporting embankment to facilitate placement of first layer of embankment, scarified to a depth of 150mm, mixed with water at OMC and then compacted by rolling so as to achieve minimum dry density as given in Table 300-2 for embankment construction. complete as per specifications. Case-II: Compacting original ground supporting embankment.(which includes watering charges & compaction by vibratory roller) MORTH Specification No. 305.3.4 (PWD SR 2011-12, Pg No 157, Item No. 19.66)	Cum	3156.54	26.46	83522.00
6	KSRRB M300-55. Construction of sub-grade and earthen shoulders with approved material Gravel/Murrum with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of Table No. 300-2 complete as per specifications (including cost of earth, watering charges & compaction by vibratory roller) MORTH Specification No. 305 (PWD SR 2011-12, Pg No 156, Item No. 19.62)	Cum	6997.02	253.20	1771612.00
7	KSRRB M400-7. Construction of granular sub-base by providing Coarse graded material, speading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per specifications.ForCoarse graded granular sub-base material as per 400-2 For Grading I Material (PWD SR 2011-12, Pg No 164, Item No. 20.6.1)	Cum	2104.36	1069.20	2249982.00

Sl. No.	Description of Work	Unit	Quantity	Rate in Rs.	Amount in Rs.
8	KSRRB M400-17. Providing, laying, spreading and compacting graded stones aggregate to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406(PWD SR 2011-12, Pg No ~~167~~ 166, Item No. 20.18)	**Cum**	2630.45	1078.92	**2838045.00**
9	KSRRB M500-6. Providing and applying primer coat with bitumen emulsion on prepared surface of granular base including clearing of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications. MORTH Specification No. 502 (PWD SR 2011-12, Pg No 171, Item No. 21.6)	**Sqm**	14430.00	35.96	**518961.00** 518903.00
10	KSRRB M500-10. Tack Coat:- Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechancial broom. complete as per specifications. MORTH Specification No. 503 using Bituminous Emulsion (PWD SR 2011-12, Pg No 172, Item No. 21.10.1)	**Sqm**	28860.00	9.94	**286753.00** 286868.00

Sl. No.	Description of Work	Unit	Quantity	Rate in Rs.	Amount in Rs.
11	KSRRB M500-17. Providing and laying dense graded bituminous macadam with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder at 4.0 to 4.5% by weight of total mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 500.7 complete in all respects as per specifications. Bitumen 60/70MORTH Specification No. 507 50-75mm compacted thickness (Grading II) with 4.5% Bitumen(PWD SR 2011-12, Pg No 174, Item No. ~~21.19~~) 21.19.2	**Cum**	721.50	7959.60	**5742851.00**
12	KSRRB M500-18. Providing and laying semi dense bituminous concrete with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder at 4.5 to 5% of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 500.8 complete in all respects as per specifications.25-30mm compacted thickness with 5% bitumen 60/70 grade (Grading II) (PWD SR 2011-12, Pg No 174, Item No. ~~21.22.2~~) 21.20.2	**Cum**	360.75	8031.96	**2897530.00**

Sl. No.	Description of Work	Unit	Quantity	Rate in Rs.	Amount in Rs.
13	KSRRB M1200-48.1. Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M-20 grade PCC on M-10 grade foundation 150 mm thick, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb lying machine, founation concrete laid manually, all complete as per Clause 400.8 complete as per spcifications. A. Using Concrete Mixer MORTH Specification No.408 (PWD SR 2011-12, Pg No 217, Item No.26.126)	**Rmtr**	3848.00	305.64	**1176103.00**
14	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8(PWD SR 2011-12, Pg No 191, Item No.24.1)	**Rmtr**	1404.52	48.49	**68108.00** 68105.00
15	KSRRB M800-13.Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface:- Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803 (PWD SR 2011-12, Pg No 193, Item No.24.15)	**Rmtr**	577.20	429.84	**248104.00**

Sl. No.	Description of Work	Unit	Quantity	Rate in Rs.	Amount in Rs.
16	KSRRB M800-2. Retro-Reflectorised Traffic Signs :- Providing and fixing of retro-reflectorised cautionary, mandatory and informatory sign as per IRC :67 made of high intensity grade sheeting vide clause 800.1.3, fixed over Aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing complete as per specifications. MORTH Specification No.801 (PWD SR 2011-12, Pg No 191, Item No.24.2.1)	Nos	15.00	2924.64	43870.00
	Total				**19036804.00**

19036837 =00

AE

WIDENING OF ROAD FROM FORM BHADRAPPA LAYOUT SIGNAL TO KODIGEHALLI CIRCLE					
Abstract for Drain					
Sl. No.	**Description of Work**	**Unit**	**Quantity**	**Rate in Rs.**	**Amount in Rs.**
1	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location and complete as per specifications. MORTH Specification No.301 (PWDSR 2011-12, Pg No150, Item No.19.14)	**Cum**	2808.96	115.23	**323663.00**
2	KSRB 4-1.1: Providing and laying in position plain cement concrete of mix M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @0.878cum and fine aggregtes @ 0.459cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2 (PWDSR Pg No-12, Item No-4.1)	**Cum**	164.16	4172.04	**684882.00**
3	KSRB 4-1.6 ; Providing and laying in position plain cement concrete of mix M15 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @0.878cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation,plinth and cills, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2(PWDSR Page no-12, Item No-4.6)	**Cum**	85.80	4275.72	**366857.00**

Sl. No.	Description of Work	Unit	Quantity	Rate in Rs.	Amount in Rs.
4	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as perspecifications. Specification No. KBS 4.6.3(PWDSR Page no-19, Item No-4.46)	Qtl	579.55	6803.51 ~~7347.82~~	3942991.00 **4258418.00**
5	KSRB 4.2.8 : Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregtes @ 0.46cum, with superplastisiser @3lts confirming to IS9103- 1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for R.C.C. beams, columns of all sizes in foundation plinth and superstructure ground floor level for roof slabs, staircase, lintles, columns, including cost of all materials, labour, HOM of machinery, curing, complete as per specifications. Specification No. KBS 4.1, 4.6(PWD SR Page no-19, Item No-4.17) 4.49.2	**Cum**	607.36	4753.08	**2886831.00**
6	KSRB 4-6.5 : Providing and removing centering, shuttering, strutting, propping etc., for columns, pillars, piers, abutments, post and struts, square / rectangular / polygon in plan including cost of all materials, labour complete as per specificaiton. Specification No. KBS 4.6.2 (PWDSR Page no-17, Item No 4.32)	**Sqm**	6526.40	275.40	**1797371.00**

Sl. No.	Description of Work	Unit	Quantity	Rate in Rs.	Amount in Rs.
7	KSRRB M2200-8. Providing weep holes in Brick masonry / Plain / Reinforced concrete abutment, wing wall / return wall with 100 mm dia AC pipe, extending through the full width of the structure with slope of 1V :20H towards drawing foce. Complete as per drawing and Technical Specifications complete as per specifications MORTH Specification No.2706 & 2200(PWDSR Page no-229, Item No-28.10)	Rmt	55.40	148.23	8212.00
	Total				**10326234.00**

10010807 = 00

WIDENING OF ROAD FROM FORM BHADRAPPA LAYOUT SIGNAL TO KODIGEHALLI CIRCLE							
Detailed Estimation for Roads							
Sl. No.	**Description of Work**	**Unit**	**No.**	**Length (m)**	**Breadth (m)**	**Depth (m)**	**Quantity**
1	KSRRB M200-11.1. Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removalof stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness complete as per specifications . II. By Mechanical Means:A. In area of light jungle. MORTH Specification No. 201(PWD SR 2011-12, Pg No 144, Item No. 18.15).						
	0.0m to 980m	Sqm	2	980.00	5.00		9800.00
		Hect.					1.00
	Deduct 25% for void	Hect.					0.25
	Net total						**0.75**
2	KSRRB 200-1. Cutting of trees girth from 600mm to 980mm including cutting of trunks, branches and removal of stumps stacking of serviceable materials within a lead of 100 metres, earth filling in the depressions / pit, labour charges complete as per specifications. MORTH Chapter 2 (PWD SR 2011-12, Pg No 143, Item No. 18.2)						
		No.	15				**15.00**
4	KSRRB 300-1. Earthwork excavation by manual means in hard soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications. MORTH / Chapter 3(PWD SR 2011-12, Pg No 149, Item No. 19.2)						
	Total as per Qty sheet	Cum					6600.16
							6600.16
5	KSRRB M300-59.2. Loosening, levelling and compacting origial ground supporting embankment to facilitate placement of first layer of embankment, scarified to a depth of 150mm, mixed with water at OMC and then compacted by rolling so as to achieve minimum dry density as given in Table 300-2 for embankment construction. complete as per specifications. Case-II: Compacting original ground supporting embankment.(which includes watering charges & compaction by vibratory roller) MORTH Specification No. 305.3.4 (PWD SR 2011-12, Pg No 157, Item No. 19.66)						
	0.0m to 222.0m	Cum	1	222.00	15.90	0.30	1058.94
	240.0m to 330.0.0m	Cum	1	90.00	15.90	0.30	429.30
	330.0m to 840.0.0m	Cum	1	510.00	7.50	0.30	1147.50
	840.0m to 980.0m	Cum	1	140.00	12.40	0.30	520.80
							3156.54
6	KSRRB M300-55. Construction of sub-grade and earthen shoulders with approved material Gravel/Murrum with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of Table No. 300-2 complete as per specifications (including cost of earth, watering charges & compaction by vibratory roller) MORTH Specification No. 305 (PWD SR 2011-12, Pg No 156, Item No. 19.62)						
	0.0m to 222.0m	Cum	1	222.00	15.90	0.30	1058.94
	240.0m to 330.0.0m	Cum	1	90.00	15.90	0.30	429.30

Sl. No.	Description of Work	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
	330.0m to 840.0.0m	Cum	1	510.00	7.50	1.30	4972.50
	840.0m to 980.0m	Cum	1	140.00	12.40	0.30	520.80
	For Filling (From Qty sheet)	Cum					15.48
							6997.02
7	KSRRB M400-7. Construction of granular sub-base by providing Coarse graded material, speading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per specifications.ForCoarse graded granular sub-base material as per 400-2 For Grading I Material (PWD SR 2011-12, Pg No 164, Item No. 20.6.1)						
	0.0m to 222.0m	Cum	1	222.00	15.90	0.20	705.96
	240.0m to 330.0.0m	Cum	1	90.00	15.90	0.20	286.20
	330.0m to 840.0.0m	Cum	1	510.00	7.50	0.20	765.00
	840.0m to 980.0m	Cum	1	140.00	12.40	0.20	347.20
							2104.36
8	KSRRB M400-17. Providing, laying, spreading and compacting graded stones aggregate to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406(PWD SR 2011-12, Pg No 167, Item No. 20.18)						
	0.0m to 222.0m	Cum	1	222.00	15.90	0.25	882.45
	240.0m to 330.0.0m	Cum	1	90.00	15.90	0.25	357.75
	330.0m to 840.0.0m	Cum	1	510.00	7.50	0.25	956.25
	840.0m to 980.0m	Cum	1	140.00	12.40	0.25	434.00
							2630.45
9	KSRRB M500-6. Providing and applying primer coat with bitumen emulsion on prepared surface of granular base including clearing of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications. MORTH Specification No. 502 (PWD SR 2011-12, Pg No 171, Item No. 21.6)						
	0.0m to 222.0m	Sqm	1	222.00	15.00		3330.00
	240.0m to 330.0.0m	Sqm	1	90.00	15.00		1350.00
	330.0m to 840.0.0m	Sqm	1	510.00	15.00		7650.00
	840.0m to 980.0m	Sqm	1	140.00	15.00		2100.00
							14430.00
10	KSRRB M500-10. Tack Coat:- Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechancial broom. complete as per specifications. MORTH Specification No. 503 using Bituminous Emulsion (PWD SR 2011-12, Pg No 172,						
	0.0m to 222.0m	Sqm	2	222.00	15.00		6660.00
	240.0m to 330.0.0m	Sqm	2	90.00	15.00		2700.00
	330.0m to 840.0.0m	Sqm	2	510.00	15.00		15300.00
	840.0m to 980.0m	Sqm	2	140.00	15.00		4200.00
	Total						**28860.00**

Sl. No.	Description of Work	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
11	KSRRB M500-17. Providing and laying dense graded bituminous macadam with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder at 4.0 to 4.5% by weight of total mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 500.7 complete in all respects as per specifications. Bitumen 60/70MORTH Specification No. 507 50- 75mm compacted thickness (Grading II) with 4.5% Bitumen(PWD SR 2011-12, Pg No 174, Item No. 21.19)						
	0.0m to 222.0m	Cum	1	222.00	15.00	0.050	166.50
	240.0m to 330.0.0m	Cum	1	90.00	15.00	0.050	67.50
	330.0m to 840.0.0m	Cum	1	510.00	15.00	0.050	382.50
	840.0m to 980.0m	Cum	1	140.00	15.00	0.050	105.00
	Total						**721.50**
12	KSRRB M500-18. Providing and laying semi dense bituminous concrete with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder at 4.5 to 5% of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 500.8 complete in all respects as per specifications.25-30mm compacted thickness with 5% bitumen 60/70 grade (Grading II) (PWD SR 2011-12, Pg No 174, Item No. 21.22.2)						
	0.0m to 222.0m	Cum	1	222.00	15.00	0.025	83.25
	240.0m to 330.0.0m	Cum	1	90.00	15.00	0.025	33.75
	330.0m to 840.0.0m	Cum	1	510.00	15.00	0.025	191.25
	840.0m to 980.0m	Cum	1	140.00	15.00	0.025	52.50
	Total						**360.75**
13	KSRRB M1200-48.1. Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M-20 grade PCC on M-10 grade foundation 150 mm thick, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb lying machine, founation concrete laid manually, all complete as per Clause 400.8 complete as per spcifications. A. Using Concrete Mixer MORTH Specification No.408 (PWD SR 2011-12, Pg No 217, Item No.26.126)						
		Rmtr.	4	962.00			**3848.00**
14	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8(PWD SR 2011-12, Pg No 191, Item No.24.1)						
		Sqm	4	962.00		0.37	**1404.52**

Sl. No.	Description of Work	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
15	KSRRB M800-13.Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface:- Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803 (PWD SR 2011-12, Pg No 193, Item No.24.15)						
		Sqm	6	962.00	0.10		**577.20**
16	KSRRB M800-2. Retro-Reflectorised Traffic Signs :- Providing and fixing of retro-reflectorised cautionary, mandatory and informatory sign as per IRC :67 made of high intensity grade sheeting vide clause 800.1.3, fixed over Aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing complete as per specifications. MORTH Specification No.801 (PWD SR 2011-12, Pg No 191, Item No.24.2.1)						
		No.	15				**15.00**

WIDENING OF ROAD FROM FORM BHADRAPPA LAYOUT SIGNAL TO KODIGEHALLI CIRCLE							
Detailed Estimation for RCC Drain							
Sl. No.	**Description of Work**	**Unit**	**No.**	**Length (m)**	**Breadth (m)**	**Depth (m)**	**Quantity**
1	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location and complete as per specifications. MORTH Specification No.301 (PWDSR 2011-12, Pg No150, Item No.19.14)						
	0.0m to 222.0m	Cum	2.0	182.00	1.80	1.30	851.76
	240.0m to 980.0m	Cum	1.0	580.00	1.80	1.30	1357.20
	Cross Roads	Cum	20.0	10.00	2.00	1.50	600.00
	Total						**2808.96**
2	KSRB 4-1.1: Providing and laying in position plain cement concrete of mix M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @0.878cum and fine aggregtes @ 0.459cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2 (PWDSR Pg No-12, Item No-4.1)						
	For PCC Bed						
	0.0m to 222.0m	Cum	2.0	182.00	1.40	0.10	50.96
	240.0m to 980.0m	Cum	1.0	580.00	1.40	0.10	81.20
	Cross Roads	Cum	20.0	10.00	1.60	0.10	32.00
	Total						**164.16**
3	KSRB 4-1.6 ; Providing and laying in position plain cement concrete of mix M15 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @0.878cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation,plinth and cills, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2(PWDSR Page no-13, Item No-4.6)						
	0.0m to 222.0m	Cum	2.0	182.00	1.00	0.075	27.30
	240.0m to 980.0m	Cum	1.0	580.00	1.00	0.075	43.50
	Cross Roads	Cum	20.0	10.00	1.00	0.075	15.00
	Total						**85.80**
4	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as perspecifications. Specification No. KBS 4.6.3(PWDSR Page no-19, Item No-4.46)						
a	**For Drain**						
	10mm Dia bars for side wall @ 0.617kg/m						

Sl. No.	Description of Work	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
	No.of main bars = 182000/200 = 910	Kgs	8.0	910.00	1.15	0.617	5165.52
	10mm Dia bars for bottom wall @						
	No.of main bars = 182000/200 = 910	Kgs	4.0	910.00	1.250	0.617	2807.35
	8 mm Dia bars for Top slab @ 0.395 kg/m						
	No. of main bars =182000/250 = 728	Kgs	2.0	728.00	1.250	0.395	718.90
	8mm Dia bars for side wall @ 0.395 kg/m						
	No.of Distr bars =980/200 = 5+1	Kgs	8.0	6.00	182.00	0.395	3450.72
	8 mm Dia bars for bottom slab @						
	No.of Distr bars =1150/200 = 6+1	Kgs	4.0	7.00	182.00	0.395	2012.92
	8 mm Dia bars for Top slab @ 0.395 kg/m						
	No.of Distr bars =1150/250 = 5+1	Kgs	2.0	6.00	182.00	0.395	862.68
							15018.09
a	**For Drain**						
	10mm Dia bars for side wall @ 0.617kg/m						
	No.of main bars = 580000/200 = 4575	Kgs	4.0	2900.00	1.15	0.617	8230.78
	10mm Dia bars for bottom wall @						
	No.of main bars =580000/200 = 2900	Kgs	2.0	2900.00	1.250	0.617	4473.25
	8 mm Dia bars for Top slab @ 0.395 kg/m						
	No. of main bars =580000/250 = 2320	Kgs	1.0	2320.00	1.250	0.395	1145.50
	8mm Dia bars for side wall @ 0.395 kg/m						
	No.of Distr bars =980/200 = 5+1	Kgs	4.0	6.00	580.00	0.395	5498.40
	8 mm Dia bars for bottom slab @						
	No.of Distr bars =1150/200 = 6+1	Kgs	2.0	7.00	580.00	0.395	3207.40
	8 mm Dia bars for Top slab @ 0.395 kg/m						
	No.of Distr bars =1150/250 = 5+1	Kgs	1.0	6.00	580.00	0.395	1374.60
							23929.93

Sl. No.	Description of Work	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
b	**For Cross Road Drains**						
	12mm Dia bars for side wall @ 0.890						
	No.of main bars =9800/140 =71	Kgs	4.0	71.00	1.50	0.890	379.14
	12 mm Dia bars for bottom and top slab						
	No.of main bars =9800/200 = 50	Kgs	4.0	50.00	1.70	0.890	302.60
	8 mm Dia bars for bottom and top slab @						
	No.of main bars =1500/200 =8+1	Kgs	4.0	9.00	10.00	0.395	142.20
	8mm Dia bars for side wall @ 0.395 kg/m						
	No.of Distr bars =1300/200 = 7+1	Kgs	4.0	8.00	10.00	0.395	126.40
	For 1no of Cross Road Drains total steel						**950.34**
	For 20 nos of Cross Road Drains total steel						**19006.80**
							57954.82
	Total	Qtl					**579.55**
5	KSRB 4.2.8 : Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregtes @ 0.46cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for R.C.C. beams, columns of all sizes in foundation plinth and superstructure ground floor level for roof slabs, staircase, lintles, columns, including cost of all materials, labour, HOM of machinery, curing, complete as per specifications. Specification No. KBS 4.1, 4.6(PWD SR Page no-15, Item No-4.17)						
	Bottom slab						
	0.0m to 222.0m	Cum	2.0	182.0	1.20	0.10	43.68
	240.0m to 980.0m	Cum	1.0	580.0	1.20	0.10	69.60
	Cross Roads	Cum	20.0	10.0	1.40	0.20	56.00
	For Side Wall						
	0.0m to 222.0m	Cum	4.0	182.00	1.00	0.10	72.80
	240.0m to 980.0m	Cum	2.0	580.00	1.00	0.10	116.00
	Cross Roads	Cum	40.0	10.00	1.00	0.20	80.00
	Top slab						
	0.0m to 222.0m	Cum	2.0	182.0	1.20	0.10	43.68
	240.0m to 980.0m	Cum	1.0	580.0	1.20	0.10	69.60
	Cross Roads	Cum	20.0	10.0	1.40	0.20	56.00
	Total						**607.36**
6	KSRB 4-6.5 : Providing and removing centering, shuttering, strutting, propping etc., for columns, pillars, piers, abutments, post and struts, square / rectangular / polygon in plan including cost of all materials, labour complete as per specificaiton. Specification No. KBS 4.6.2 (PWDSR Page no-17, Item No-4.32)						

Sl. No.	Description of Work	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
	For Side Wall(Inside)						
	0.0m to 222.0m	Cum	4.0	182.00		1.00	728.00
	240.0m to 980.0m	Cum	2.0	580.00		1.00	1160.00
	Cross Roads	Cum	40.0	10.00		1.00	400.00
	For Top Slab(Side)						
	0.0m to 222.0m	Cum	4.0	182.0		0.10	72.80
	240.0m to 980.0m	Cum	2.0	580.0		0.10	116.00
	Cross Roads	Cum	40.0	10.0		0.20	80.00
	For Top Slab(Outside)						
	0.0m to 222.0m	Cum	4.0	182.00		1.20	873.60
	240.0m to 980.0m	Cum	2.0	580.00		1.20	1392.00
	Cross Roads	Cum	40.0	10.00		1.40	560.00
	For Top Slab(Inside)						
	0.0m to 222.0m	Cum	2.0	182.00		1.00	364.00
	240.0m to 980.0m	Cum	1.0	580.00		1.00	580.00
	Cross Roads	Cum	20.0	10.00		1.00	200.00
	Total						**6526.40**
7	KSRRB M2200-8. Providing weep holes in Brick masonry / Plain / Reinforced concrete abutment, wing wall / return wall with 100 mm dia AC pipe, extending through the full width of the structure with slope of 1V :20H towards drawing foce. Complete as per drawing and Technical Specifications complete as per specifications MORTH Specification No.2706 & 2200(PWDSR Page no-229, Item No-28.10)						
	For Weep Holes	Rmtr	146	0.10			14.6
	For Weep Holes	Rmtr	232	0.10			23.2
	For Weep Holes	Rmtr	88	0.20			17.6
							55.4